DFS QUARTERLY

A Publication of the Department of Fire Services • Stephen D. Coan, State Fire Marshal • Vol. 4 • Issue 1 • March, 1999

Update on CMR 2: Fireworks

As you all may be aware, 527 CMR 2 has undergone a major rewrite and the changes became effective in February. The primary changes involve references to, and adoption of NFPA Standards, the most notable of which is a new table of distances. From a



public safety standpoint, the new CMR 2 represents a major improvement with regard to the distance at which spectators view a fireworks show.

Education & Support

With any major change in a regulation, there are bound to be misunderstandings and misconceptions. In light of that, the obvious next step in the process is education and support. Through the Massachusetts Firefighting Academy, a series of informative seminars have been scheduled starting in March and continuing into May and June. The following dates are now set for this four hour seminar:

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March 31, 1999

Next Underground Storage Tank Deadline

he March 31, 1999 deadline for L underground storage tanks is coming up soon. According to 527 CMR 9.07 (O) (1)(c), the owner or operator of any underground storage tank that was rendered inoperative, cleaned and inert back on December 22,1998, must present to the head of the fire department a copy of a written agreement or signed contract to remove the tank by March 31, 1999. The removal or permanent closure of any underground tank and piping shall be in accordance with 527 CMR 9.07 (K) and be completed before the September 30, 1999 removal deadline. Failure of any owner or operator of underground tank(s) to provide a contract or agreement by the March 31, 1999 deadline shall be in violation of the regulation. Let's get the word out to the owners and operators of all

underground storage tanks, that are required to meet this deadline. This will ensure continued compliance with the underground storage tank upgrade and removal process. •

State Fire Marshal Praises Fire Chiefs for Efforts to Cut Fire Deaths

Thanks to the efforst of local fire officials, the fire deaths in 1998 were reduced to a record low of 59. State Fire Marshal Stephen D. Coan said, "This is the lowest number of fire deaths on record since World War II." 1998 started off with a tragic series of fatal fires — nearly one death per day for the first three weeks of the year. I am grateful the concerted

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From the Desk of the Fire Marshal

Stephen D. Coan

New Secretary of Public Safety Appointed

e are pleased to announce the appointment of Jane Perlov as Secretary of Public Safety in mid-January. Secretary Perlov was welcomed here at the DFS Stow campus for the first time at the graduation of Recruit Class #128 on February 5, 1999.

A Tribute to the Academy

The recruit coordinators generally try to bring graduates back as speakers since they can best inspire the graduates with their real life stories. Many of the speakers feel that their lives may have been in danger had they not had the knowledge and skills gained through the Academy's fire training program. Michael Gelinas, graduate of Recruit Class #104 and the guest speaker at the graduation ceremonies for Recruit Class #127, experienced just such a situation.

On April 3, 1998, the Fitchburg Fire Department responded to a fire at 88 Marshall Street. When the firefighters arrived on the scene, the building was totally engulfed in smoke and flames. As they rushed toward the building they were confronted by an hysterical mother whose son was still trapped inside. Firefighter Gelinas, one of the first on the scene, recounted how he was able to perform while operat-

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From the Fire Marshal

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ing under dangerous and hostile conditions. FF Gelinas was advancing a hoseline under untenable conditions and zero visibility. He described how he visualized the face of recruit instructor James Blanchard encouraging him to concentrate, to move forward and stay on the wall. As I sat listening to the words of FF Gelinas, I realized that there is no higher compliment that could be paid to the recruit program, or to an individual fire instructor. To have the caliber of instructor that truly inspires confidence and ability, long after the instruction is over, is a credit to the Massachusetts Firefighting Academy. We can only hope that firefighters like Gelinas will continue to share their knowledge and expertise and to nurture the growth of professionals.

By the way, 3-year old Joseph Alvarez was found in the hot and smoky apartment under a bed, unconscious and not breathing. He was rescued and recovered enough to assist Governor Cellucci present the Firefighter of the Year Medal of Honor to Fitchburg Lt. Gregg Normandin last October.

Fire Prevention Success

Early in February, premium gasoline was mistakenly added to the kerosene tank at a West Springfield Merit gas station. When the problem was discovered 114 gallons of contaminated kerosene had been sold. The excellent tank monitoring and record keeping at Merit Oil allowed for the accurate and immediate determination of exactly how many gallons were involved. Since all the sales were in cash, there was no record of the

customers. The investigators decided the best means to alert the public was through the media. Due to the prompt cooperation from the print and electronic media, the public was alerted to this potentially catastrophic situation. Investigators from the Fire Investigation Unit's West Team that assisted the West Springfield Fire Department, believe that all of the unused contaminated fuel was successfully recovered and that the one person who actually used four gallons in an industrial steam cleaner was extremely lucky he was not hurt. Without the cooperation and prompt action of the media who assisted public safety officials in alerting the public, we would not have been as successful in recovering all the contaminated fuel without incident.

Arrest for Waltham Arson Shows Team Approach Pays Off

The quick arrest of a short order cook in Waltham for a February fire in an historical building, clearly demonstrates that the team approach to fire investigation. Our investigators arrive on the scene while the fire is still raging to immediately swell the ranks of local fire and arson investigators to canvass witnesses, occupants, and first arriving fire companies. This influx of investigation manpower at the critical early stage, frequently develops leads that solve cases before they are lost to the confusion of a fire scene. One critical component of this team approach is the training that has prepared both local and state investigators to hit the ground running. Another key element to successful investigations is the effective partnerships that are developing between individual local and state investigators.

Thinking Outside the Box

A source of continued frustration for fire chiefs is the backlog of firefighters waiting for admission to the 11-week recruit training program at the Massachusetts Firefighting Academy. There is currently an initiative in front of the Legislature addressing long-term solutions to this issue.

While we recognize that the long-term solution is multiple training facilities, and we are currently pursuing use of space at the Westover Air Force Base, we must move forward. The recruit training staff at MFA has studied several options to increase delivery of recruit training using the existing facilities. One of their recommendations is to double shift the training facility with one group training from 7 AM to 3 PM and one group training from 11 AM to 7 PM. This would optimize use of classroom space and time as well as the drill yard facilities. We are currently examining all of the implementation issues for this shortterm solution.

Anthrax Threat Protocol

Due to the numerous threats across the country, including one in New Hampshire, the Department of Fire Services issued an Anthrax Threat Protocol in December to all local fire chiefs. This protocol was developed by the DFS' Hazardous Materials Response program in conjunction with all state and federal agencies that would respond to such an incident. An Anthrax Advisory from the Federal Bureau of Investigation was also included in the packet to all chiefs. As additional information or guidelines on this topic become available, our protocol will also be modified. •

NEWS FROM CPSC

The following are excerpts from press releases issued by the U.S. Consumer Product Safety Commission (CPSC) regarding products recalled for fire or burn hazards. Consumers should immediately stop using any of these products and contact the U.S. Consumer Product Safety Commission or the manufacturer for instructions on how to proceed.

Release # 99-056 February 3, 1999

GE Brand Spacemaker Radio Cassette Players

In cooperation with the U.S. CPSC, Thomson Consumer Electronics Inc., of Indianapolis, IN, is voluntarily recalling about 424,000 GE Spacemaker radio cassette players. The unit has an appliance outlet that can overheat, presenting a fire hazard to consumers.

Thomson Consumer Electronics has received three reports of appliance outlets on the units overheating and catching fire, causing minor property damage. No injuries have been reported.

Only units with model number 7-4285

are involved in this recall. No other Spacemaker models are involved in this recall. The model number is located on the top of the unit and may or may not be followed by a letter. The unit is designed for under-the-cabinet use and consists of an AM/FM stereo cassette player, a light and a programmable appliance outlet, which allows for a timer to control the power to the outlet. The appliance outlet is located on the left side of the unit. "GE Spacemaker...AM/FM Stereo Cassette Player...Programmable Appliance Outlet" is on the front of the unit. The control panel is black and is located on the front of the unit between the two speakers.

Department, electronic and discount stores nationwide sold the units from January 1992 through December 1995 for about \$50 to \$80.

Release # 99-059 February 10, 1999

Recall of AC Adapters for Digital Cameras

In cooperation with the U.S. CPSC, Eastman Kodak Company, of Rochester, N.Y., is voluntarily recalling 120,000 AC adapters for use with certain Kodak digital cameras. When the connector plug of the AC adapter is not fully inserted in the camera, the batteries in the camera can overheat to a high temperature. This can cause the batteries to leak acid and explode, possibly causing thermal and chemical burns or lacerations to consumers.

Kodak is aware of three reports of the batteries in these cameras overheating and rapidly discharging the battery's contents while using these recalled adapters, including one report of a consumer suffering minor injuries when a battery's content ejected from the camera onto his face and hand.

These AC adapters were manufactured by ELPAC Electronics Inc., of Irvine, Calif. They were sold separately as optional accessories for use with Kodak digital cameras and authorized for use by Kodak. These AC adapters have model numbers 2534, 2457, MI2008 and M42008. The brand name and model numbers can be found on labels affixed to the adapters. These AC adapters have angled or tapered connector tips. ELPAC models 2534 and M42008 have an Underwriters Laboratories (UL) label. The Kodak digital cameras that use these AC adapters have model numbers CD25, DC40, DC50 and DC120. The model number and "Kodak" are written on the front of the cameras. Only the ELPAC AC adapter is being recalled, and not the Kodak cameras.

Department, electronic, computer and camera stores, as well as mail-order and web retailers sold these AC adapters nationwide from March 1996 to August 1998 for between \$40 and \$80.

A recalled ELPAC AC adapter with an angled connector tip (left) and the replacement ELPAC AC adapter.

If you purchased an AC adapter with



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an angled or tapered connector tip that was not authorized to be used by Kodak, it should not be used with these digital cameras. Kodak is not replacing AC adapters it did not authorize for use.

Release # 99-064 February 18, 1999

Recall of Marine-Type Batteries

In cooperation with the U.S. CPSC, the U.S. Coast Guard, and Trojan Battery Co., of Santa Fe Springs, Calif., is recalling approximately 11,000 marine-type batteries, which also can be used as a mobile home or recreational vehicle auxiliary power source. These batteries could have a cracked negative terminal post that could lead to internal sparking and possible explosion. An exploding battery can result in chemical and thermal burns, and lacerations to people in the area.

Trojan Battery Co. is not aware of any injuries or incidents involving these batteries. This recall is being conducted to prevent the possibility of injury.

Only Type 27TMN batteries are involved in this recall. These 12-volt batteries were sold under the brand names "Action Pack," "Pro-Guide," "Sea Volt," "Trojan," "Centennial Battery," and others.

To determine if your battery is part of this recall, look for the following symbols stamped on the positive battery terminal post: "I01," "I04," "I12," "I14," "I15," "I21," "I29," "J05" and "J17."

Major marine and discount retailers sold these batteries between September 1998 and December 1998 for between \$79 and \$89.

Extension Cords

Release # 99-067 February 23, 1999

Recall of Extension Cords

In cooperation with the U.S. CPSC, Wellmax International Inc., of Long Beach, Calif., is voluntarily recalling nearly 1 million extension cords. The cords have undersized wires and reverse polarity receptacles that allow plugs to be incorrectly inserted, presenting fire, shock and electrocution hazards to consumers.

CPSC and Wellmax are not aware of any injuries involving these cords. This recall is being conducted to prevent the possibility of injury. The household extension cords are white and are available in lengths of 6, 9, 12, 15 and 20 feet. The labeling, "SPT-2...18AWGX2C...60...C", is imprinted in

black on the cords. The cords were packaged in a green cardboard display sleeve, labeled in part, "HOUSE-HOLD EXTENSION CORD...SPT-2...MADE IN CHINA.

Discount and tool stores in California, Florida, New Jersey, New York and Texas sold the cords from March 1997 through November 1998 for about \$1 to \$2.

Release # 99-039 December 17, 1998

The following product safety recalls were conducted by firms in cooperation with the CPSC.

PRODUCT: Extension Cords -Morton Paper Co. of Brooklyn, N.Y., is recalling about 75,750 extension cords. The recalled extension cords are white and brown. The cords each have three receptacles and one two-prong plug. The white cords are available in lengths of 9, 12 and 15 feet. The brown cords are available in lengths of 6, 9, 12, 15 and 20 feet. The cords are packaged in green, white and red cardboard display sleeves that are labeled in part, "HOUSEHOLD EXTENSION CORD...MADE IN CHINA." The last 5 digits of the UPC code range from 18006 through 18020. Discount stores throughout the New York Metropolitan area sold the extension cords from October 1997 through June 1998 for about \$1 to \$2.

PROBLEM: The cords have undersized wires that cannot carry the advertised load, lack overcurrent protection and are equipped with plugs that are not polarized properly, presenting fire, shock and electrocution hazards.

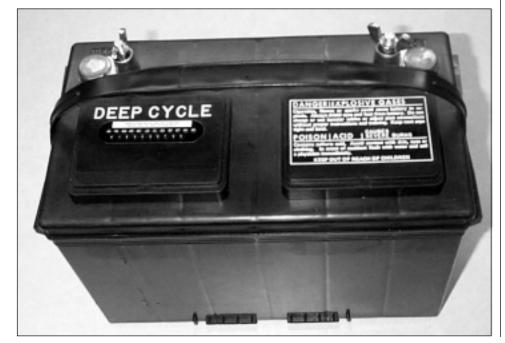
INCIDENTS/INJURIES: None reported.

Release # 99-039 December 17, 1998

Hair Dryer Recall

PRODUCT: Portable Hairdryer - Sound-Tech Import Inc., of Los

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Angeles, Calif., is recalling about 360 portable hairdryers. These hairdryers are white and black plastic with black accessories. A label near the air vent reads, "International AC 110V 50/60 HZ 1500W." The housing is labeled, "WARNING — TO AVOID POS-SIBLE ELECTRIC SHOCK, DO NOT IMMERSE OR USE WHILE BATHING." The carton was labeled, in part, "INTERNATIONAL . . . COMPACT PRO WITH ATTACH-MENTS . . . MADE IN CHINA . . . SX-3000." Small, independent retailers sold these hairdryers from March 1996 through November 1998 for about \$7.

PROBLEM: These hairdryers are not equipped with Ground Fault Circuit Interrupters (GFCIs) to prevent electric shock in case of current leakage.

INCIDENTS/INJURIES: None reported.

Release # 99-058 February 9, 1999

Ace Hardware Corp. Recalls Butane Lighters

In cooperation with the U.S. CPSC, Ace Hardware Corp., of Oak Brook, Ill., is recalling approximately 403,000 Ace butane, multipurpose lighters. These lighters can leak excess butane when they are in use, causing an unexpected flashback or sudden burst of flame. This presents a risk of burns to consumers and unintentional fires can occur.

Ace Hardware Corp. has received six reports of flame flashback, one resulting in a small kitchen fire and one consumer having her hair singed.

The lighter is approximately 9 inches long, has a black plastic base with red plastic trim and a metal igniter shaft. The bottom of the handle is marked MADE IN CHINA and the metal igniter shaft is embossed with GAS TORCH. A red sticker on the lighter reads, refillable. These lighters were sold under Ace brand packaging, item number 4100715. The item number is

printed on the upper right corner of the packaging.

Ace Hardware stores nationwide sold the lighters from March 1997 to May 1998 for between \$2 and \$3.

Products Affecting Children

Release # 99-054 January 21, 1999

Recall of Flammable Spray String

In cooperation with the U.S. CPSC, KMC USA Inc., of Franklin Park, Ill., is recalling more than 190,000 cans of Party Time "Happy String." The product is hazardous if sprayed near an open flame due to the flammability of the propellant. Because it is a flammable product intended for use by children, it is a banned hazardous substance. Use of the spray string around flame sources, such as candles, could result in serious burns.

CPSC is aware of two reports of burns resulting from the use of this spray string. A 4-year old boy that was burned when some of the string ignited while he was blowing out candles on his birthday cake. He suffered first- and second-degree burns on his face and arm. A woman sustained burns on her ear in another incident.

Party Time Happy String comes in round metal spray containers about 5-inches high. The cans are mostly white, with various color plastic caps, and contain 1.75 ounces of liquid chemical. "PARTY TIME" is written on the can in different colored block letters, and "Happy String" is depicted as if it is being sprayed from a can of the spray string. Additional writing on the cans include, "MADE IN KOREA" . . . "IDEAL FOR DECORATING WALLS, TABLES, TREES, PEOPLE, ANYTHING..."

"Dollar Tree," "Dollar Bills" and "Only \$1" stores nationwide sold the spray string between October 1998 and January 1999 for about \$1.

Consumers should take this spray string away from children and stop using it immediately.

Release # 99-052 January 20, 1999

Recall of Children's Fleece Robes

In cooperation with the U.S. CPSC, Limited Too Inc., of Columbus, Ohio, is voluntarily recalling approximately 17,600 girls' fleece robes. The robes fail to meet federal flammability standards for children's-sized sleepwear. The standards require sleepwear, including robes, to be flame resistant, and if the garment ignites, the flame must self-extinguish. Failure to meet the flammability standards presents a risk of serious burn injuries to children.

Limited Too has not received any reports of injuries from these robes. This recall is being conducted to prevent the possibility of injury.

The robes involved in this recall are available in girl's sizes 7 through 14. The robes are 100 percent polyester fleece, and made in violet, teal and plaid. The front wrap robes have shawl collars and a tie belt. Some of the garments have matching satin trim around the front opening and collar. The robes are labeled "Limited Too" . . . "100% Polyester" . . . "Made in Sri Lanka."

Limited Too stores nationwide sold the robes from September 1998 through December 1998 for between \$60 and \$64. ◆

CPSC Warns Consumers About Faulty Extension Cords, Power Strips and Surge Protectors

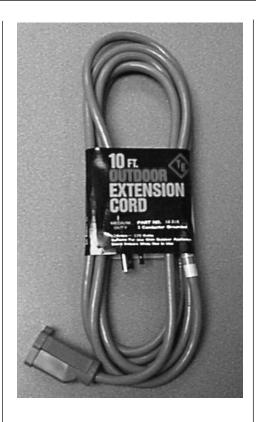
Release # 99-069 February 24, 1999

The U.S. Consumer Product Safety Commission (CPSC) is warning consumers about millions of faulty extension cords, power strips and surge protectors that pose a fire, shock and electrocution danger. Since 1994, CPSC has announced 25 recalls involving 2 million extension cords, power strips and surge protectors because they have undersized wires, loose connections, faulty components or improper grounding. The defects in these products can result in fires or pose a shock or electrocution hazard to consumers.

Most of these substandard cords were sold at discount stores and small retailers for about \$1 to \$7. Most were made in China. Many have no identifying marks or model numbers. Some have counterfeit Underwriters Laboratories (UL) certification labels. Extension cords, power strips and surge protectors must be able to handle the amount of current required by the appliance. Defective cords fail to meet current industry safety standards and can be overloaded easily if they are used to plug in even small appliances.

"With computers, VCRs, and a growing number of other appliances in our homes, more consumers are using extension cords, power strips and surge protectors," said CPSC Chairman Ann Brown. "Many meet current safety standards, but the poorly constructed models recalled in recent years are a hidden fire and electrocution hazard. You should check your home immediately and make sure you aren't using one of these recalled cords."

In 1997, CPSC began an investigation to monitor the extension cords, power strips and surge protectors sold in stores across the country. CPSC investigators inspected products sold through discount stores, mass merchandisers, dollar stores and hardware chains. After collecting suspect samples from 83 locations around the country, investigators found that 72 percent of the samples failed to meet current safety standards. CPSC also



worked with U.S. Customs to monitor the extension cords, power strips and surge protectors shipped to U.S. ports. Many of the recent recalls of these cords were the result of this investigation.

In 1996, electrical cords and plugs were involved in about 7,100 fires resulting in 120 deaths or about 32 percent of all deaths associated with residential electrical system fires. In 1997, more than 12,000 people were treated in hospital emergency rooms for electrical burns and shocks and about 2,500 people were treated for injuries associated with extension cords.

CPSC provides these safety tips for consumers:

Look for a certification label from an independent testing lab such as UL (Underwriters Laboratories) or ETL (Electrical Testing Laboratories) on the package and on the product itself. Products with this certification label meet current industry safety standards. For extension cords, look for a permanently attached certification label on the cord near the plug. For power strips and surge protectors, inspect the

- underside of the casing and make certain that it is marked with the manufacturer's name and the testing lab.
- Use electrical cords, power strips and surge protectors that have polarized plugs with one blade slightly wider the other, or grounded three-pronged plugs. These features reduce the risk of electric shock.
- Use special, heavy duty extension cords for high wattage appliances such as air conditioners, portable electric heaters and freezers.
- Extension cords used outside should be specifically designed for such use to guard against shock.
- Insert plugs fully so that no part of the prongs are exposed when the cord is in use.
- Never cover any part of an extension cord with rugs or other objects while it is in use. If the cord is covered, heat cannot escape, which can result in fire.
- Don't overload cords with too many appliances. Change the cord to a higherrated one or unplug and relocate appliances to other outlets.
- Make sure cords do not dangle from the counter or table tops where they can be pulled down or tripped over.
- If a cord feels hot to the touch, stop using it and throw it away.
- Replace cracked or worn cords.
- Don't use extension cords to compensate for inadequate home wiring. Use extension cords only when necessary and only on a temporary basis.

CPSC is working with U.S. Customs to identify shipments of substandard cords before they reach store shelves. CPSC investigators are continuing to monitor the cords currently being sold in stores. The Commission also is working with Chinese trade officials to stop exports of substandard cords to the United States. •

Early Suppression Fast Response Sprinklers

Through technology we have gone from the original fire protection of facilities (running pipe and drilling holes – deluge effect) to automatic sprinklers that protected the structure by discharging about 80% of the water toward the roof to automatic sprinklers to control a fire to automatic sprinkler protection that suppresses the fire. This development of technology has led to an automatic sprinkler that can address high challenge fires (very high storage fires) without the need for in-rack sprinklers.

The advent of this modern technology is great, but installation personnel need to be trained about the effects of installation, as well. The Early Suppression Fast Response (ESFR) sprinkler was first developed in the 1980s and didn't fully take hold in the installation work until the 1990s. From a sales/ business standpoint, it was great! It has been sold as the fix to all storage problems. Afterall, most building owners don't want in-rack sprinklers since too many fork lift operators hit them and ruin merchandise. The solution: ESFR. Why? In most cases it will allow for a high storage height without in-rack sprinklers and it allows for a variety of storage arrangements

(different rack layout and solid pile.)

Today we have a new model of ESFR sprinklers that has recently been approved. This ESFR has a K (factor relating to the size of a sprinkler orifice) of 25. Using EFSR protection allows for larger storage heights to be protected with less water pressure. The goal of the developer was to be able to eliminate the need for fire pumps.

With today's high storage heights and the ability to eliminate in-rack sprinklers, the ESFR is becoming a very attractive option. However, with this attraction and increasing popularity there are some major concerns. The National Fire Protection Association (NFPA) 13, Chapter 4 has detailed information concerning proper installation and operation. The position of the sprinkler deflector from the deck and from any obstructions must adhere to installation guidelines in order to ensure proper operation and fire suppression. If either of these issues is not correct a catastrophic fire could be the result. If you have questions, or need assistance contact Tim Rodrique, Fire Protection Engineer or Code Compliance at the Office of the State Fire Marshal 978-567-3300. ◆

Planning For the (Near) Future

By Bill Hollick, Firefighting Academy Director

During the month of April the Massachusetts Firefighting Academy management staff will confer with training committees from each of the seventeen training districts of the Commonwealth. These meetings will be conducted to exchange information and to plan for the fall, 1999 fire training semester.

Departments that would like to host a Firefighting Academy course during the months of September through December, 1999, should express those intentions to their district training committee chairman in March. The district training committee should have all requests for prioritization before meeting with the Academy management staff.

The name and phone number of your district training committee chairman can be found in the latest Academy course listing. Please contact Administration Coordinator Kate D'Amelio at 978-567-3226 if you need assistance locating this information. ◆

Free Home Childproofing Brochure

The U.S. Consumer Product
Safety Commission and CNA, a
major insurance organization, are
joining together to offer a free
brochure highlighting low-cost safety
devices for making homes safer for
young children. CPSC estimates that
more than 2.5 million young children
are injured or killed each year in oftenpreventable incidents at home.

Childproofing Your Home: 12 Safety Devices to Protect Your Children, is a colorful, easy-to read brochure that offers helpful suggestions to childproof furniture, rooms and other areas of the home. The brochure puts special emphasis on safeguarding children up to 5 years old.

This brochure provides potentially lifesaving suggestions to eliminate many home hazards, and includes a list of 12 recommended low-cost childproofing safety devices. These devices include safety latches on kitchen and bathroom cabinets to prevent poisonings, corner bumpers on furniture to prevent injuries from falls against the sharp edges, anti-scald devices for faucets to prevent burns and safety tassels for window blind cords to prevent strangulations in blind cord loops. Most of the devices

can be purchased for \$20 or less at grocery or hardware stores.

Order Childproofing Your Home: 12 Safety Devices to Protect Your Children, Item 618F by contacting the Consumer Information Center. Call the center toll-free at 1 (888) 8-PUEBLO, Monday through Friday from 9 a.m. to 8 p.m. EST, or send your name and address to Consumer Information Center, Dept. 618F, Pueblo, Colorado 81009. You also will receive a free copy of the Consumer Information Catalog, which lists more than 200 free and low-cost federal publications about a variety of consumer topics. •

Featured Program Structural Firefighting Practices

he Massachusetts Firefighting Academy offers a one-day live fire training program titled Structural Firefighting Practices. This program, offered through the Firefighter Skills Training Group, is one of several popular live fire training courses currently available to firefighters. This course provides firefighters with hands on practice in basic firefighting skills. Using a specially designed 17 room live fire training structure, a series of progressive evolutions are conducted during this 8-hour course. Starting with a demonstration fire, students are introduced to the phases of fire and the thermal layering which occurs. Once this is complete, students move through evolutions that begin with one room fires then move on to multiple rooms, multiple floors, and cellar and attic fires.

Fireground safety procedures are detailed and followed throughout the training session. Students are required to bring a full set of NFPA Standard compliant protective clothing. All students attending must meet specific elements of the NFPA 1001 Standard on Firefighter Professional Qualifications. These requirements are verified through documents signed by the local Chief of Department.

Use of the Incident Command System is practiced as well as implementation of an accountability system. Each group of 4 to 5 students is teamed with an instructor and act as a fire attack team. Safety Officers are located to monitor both interior and exterior operations and incorporate the guidelines set forth in NFPA 1403 Standard on Live Fire

Training.

Students are coached through the daylong course emphasizing teamwork, hose and nozzle handling, and problems associated with different fire scenarios. Post-incident critiques are a valuable portion of the training. This allows student input after each scenario to build a solid understanding.

This course is offered on 12 dates throughout the training year on weekdays, weekends, and evenings.

Those firefighters interested should apply early, since demand for this course exceeds available space.

For more information call the Firefighter Skills Training Group Coordinator, Fred LeBlanc or Asst. Coordinator Dan Donohue at 978-567-3216. ◆

Upcoming Events

Chief Fire Officer Graduation

U/MASS Donoughue Institute May 20, 1999

MFA - Stow

FEMA Urban Search and Rescue Demonstration

April 14, 1999 See related article page X

Connecticut Public Fire & Life Safety Education Conference

April 30, 1999, 8:00 am - 4:00 p.m. Cost: \$50.00

Location: Ramada Inn, 100 East River Drive, East Hartford, CT Course # 99160108 Application Info: Contact Kelli at

860-627-6363 ext. 221

Annual Fire Prevention Conference

Sponsored by the Fire Prevention Association of Mass. Inc. April 27-29, 1999 Amherst, MA Contact: Lynnfield Asst. Chief Robert MacKendrick at (781) 334-5152 or FPAM at (978) 745-3122 for more information

6th Annual Ounce of Prevention Conference

Voices and Choices for Change Tuesday and Wednesday, March 23 & 24, 1999 Royal Plaza Conference Center Marlboro, MA

Conference for prevention and public health professionals. Firefighters involved in community risk management, and injury prevention might find this a very interesting conference.

New England Fire/Rescue/ EMS Expo '99

Over 350 Exhibits on Display June 26 - June 28, 1999 Eastern States Exposition, Home of the "Big E", West Springfield, MA Sunday, June 27 Spectacular Fire Apparatus Parade and Western Mass. Family Fire Safety Day Professional Development Seminars Conference information – Richard K. Wehter, (781) 749-8626

11th Annual National Fire and Emergency Services Dinner

Saving Lives Starts With Prevention
April 21, 1999
Washington, DC
at the Washington Hilton
Sponsored by the Congressional Fire
Services Caucus

The dinner culminates a day of events in Washington, DC engaging the fire service, Congressional and federal agency leaders in discussion on fire service initiatives.

Contact CFSI at (202) 371-1277 or www.cfsi.org ◆

March Deadline to Request Field Programs

By John McNamara, Field Programs Coordinator

The academy sends out to every department chief, and training officer, a spring and a fall course catalog listing academy *Field Programs*. The courses run from March to June and from September to December. Each training district or county is eligible for six requests a year; three in the spring and three in the fall. The district committee chairman is listed in the catalog.

March is the time to submit requests for a field program to the district training chairman for the fall semester and September is the deadline for the spring semester. Field programs are scheduled well in advance.

Most field programs are 12 hours in length (some are 6). They can be held on weekends, nights and weekdays to suit the "host" department. Day sessions are from 9-4 p.m. with an hour break for lunch. The evening sessions are from 7-10 p.m.

Many of the courses offer OEMS credit hours. There is a list of the courses that offer OEMS credit hours on the back pages of the course catalog.

The requirements to host a program include locating a comfortable class-room that will hold up to 35 students,

such as a local school or library.

Approximately two weeks before the course is to start, 15 students should be registered here at the academy. A separate academy application form must be sent in for each student. The course will not be held if there are less then 12 students at the start of the course. Registration forms can be mailed in, or faxed to 978-567-3229.

The classroom session for a course will usually require one, or all of the following: a 35mm slide projector, an overhead projector, movie screen, VCR, flip chart stand and paper and markers. If you do not have the required projector, the Academy will provide one.

If your course involves aerial or ground ladders they must have a test certificate. If the course involves pumping apparatus and you have only one pump available for the practical session, a pumper can be sent out by the Academy. If the course is Vehicle Extrication, usually 6 or 7 vehicles would be required for the practical session. On the vehicles used, the gas tanks, batteries, and any undeployed air bag units would have to be removed.

Following are the courses offered through the Field Program which are all 12 hours in length unless otherwise

noted.

Aerial Ladders Building Construction: Wood & Ordinary

Conducting Basic Fire Inspections Electrical Safety for the Firefighter: 6 hours

Emergency Vehicle Operator: 6 hours Firefighter Health & Safety Firefighter Safety & Survival: The Company Officers Responsibility Incident Command System Incident Safety Officer Infection Control for Emergency Response Personnel: The Supervisor's Role

Large Diameter Hose Protective Breathing, Search & Rescue: (4500 psi Technology) Pumps & Hydraulics Rural Water Supply

Search for the Missing Person: 6 hours Search & Rescue: 6 hours

Small Aircraft Procedures: Familiarization & Rescue

Tactics & Strategy for the Firefighter Vehicle Extrication Wildland Fires

If you have any questions on field programs call me at 978-567-3225.

My e-mail address is: <u>John.McNamara@state.ma.us</u> ◆

Chelsea's Forgotten Hero

In the last issue of the *DFS*Quarterly, the editor neglected to mention that two firefighters, not one, were awarded the state's highest honor - Medal of Honor - at the October, 1998 Firefighter of the Year ceremony. Unintentionally omitted was the story of Chelsea's Luis Mojica who on the evening of January 25, 1998 responded to a fire at 140 Grove Street, a two-story wooden home. When fire apparatus

arrived, firefighters were informed that police had attempted to reach a second floor bedroom, but had been repulsed by the intense heat. When Firefighter Mojica heard that, he ascended the rear stairwell, and forcibly entered the back door. Proceeding through intense heat and zero visibility, he crawled into a bedroom and found 7-year old Kristina Freeman. He removed her to

a rear porch, and began mouth-to-mouth resuscitation as a team carried her to waiting EMS personnel. Firefighter Mojica saved Kristina's life. In recognition of his courageous actions, Firefighter Mojica was presented a "Firefighter of the Year" Medal of Honor by Governor A. Paul Cellucci. Kristina received a stuffed animal and a hug from Firefighter Mojica. •

Fire Protection Plan Review

By Tim Rodrique, Fire Protection Engineer

Are you receiving the proper information?

Everyone has seen submittals for fire protection; however, is everyone aware of the requirements for these submittals? The 6th edition of the Massachusetts State Building Code has developed a very specific submittal requirement. In the past the plan review submittal was very simple several sets of plans and a set of calculations. If you were lucky, the submittal also included the manufacturer's cut-sheets on all the components that were being installed.

As we move forward and try to take a lead in fire protection, the 6th edition of the State Building Code will help ensure that the proper fire protection is being installed. The 6th edition, Chapter 9, of the State Building Code is one of the strictest sections on Fire Protection in the United States today. The part that we must do as plan reviewers is to ensure these requirements are satisfied. If the requirements of the State Building Code are not satisfied, a written letter should be returned to the contractor very simply stating: The requirements of 780 CMR 9 regarding the plan review submittal have not been satisfied and the plans are considered to be unacceptable at this time.

What are the requirements of 780 CMR 9? These are really self-explanatory. The first line in section 903 reads: "Section 903.1 Required" This says it all! If you don't receive all the listed information, there is no need to even review the submittal. Very simply put, return the plans with a written letter indicating that they are unacceptable and not in accordance with 780 CMR 9. If you complete the plan reviews for your department you should utilize 780 CMR 903.1.1 as a checklist to complete the review.

In addition to the listed material, a package of cut-sheets from the

manufacturer of all the equipment should be submitted. This is necessary to ensure that the equipment has a listing, and the design requirements of the listing are satisfied. If you don't have the manufacturer's cut-sheets, how can you complete the plan review?

The 6th edition of the state building code, is very explicit regarding the approval of fire protection plans. It states (780 CMR 110.8) that when the application for permit is filed it must comply with the provisions of 780 CMR 4, 780 CMR 9, or 780 CMR 34. The building official shall cause one set of construction documents filed (780 CMR 110.7) to be sent simultaneously to the head of the local fire department for his file, review and approval of the items specified in 780 CMR 903. The review of the plans should be as they relate to the applicable sections of 780 CMR 4, 780 CMR 9 or 780 CMR 34. Further, this section states that the approval or disapproval shall be within 10 working days. However, realizing that everyone has a full schedule, extensions can be granted to a maximum of 30 working days for the plan review. If the submittal is not approved, it shall be done in writing citing the specific sections of 780 CMR or referenced standards in Appendix A (NFPA or other applicable standard).

The state building code (780 CMR 110.8) requires that all plans and specifications bear an original seal and original signature of a Massachusetts registered professional engineer or architect responsible for the design. There are some exceptions to this rule; referenced through MGL c.112 and c.143.

Contractors and personnel shall be appropriately licensed for the installation of sprinklers in the Commonwealth of Massachusetts. Any shop drawings prepared, as required for review by a professional engineer shall note the name, license number and license expiration date of the contractor installing the fire protection system in accordance with 780 CMR 903.3.

As a fire protection engineer for the Office of the State Fire Marshal, I am available to assist any fire department in the Commonwealth that makes a request. The Fire Protection Engineer of the Office of the State Fire Marshal can provide Fire Protection Engineer services to every local fire department. If you need assistance please contact the Department of Fire Services – Technical Services at 978-567-3300.

Requirements of 780 CMR 903.1.1

- 1. Basic methodology of design for the protection of the occupancy and hazards for compliance with 780 CMR and applicable NFPA standards, in the form of a narrative report.
- Building and site access for fire fighting and/or rescue vehicle(s) and personnel.
- 3. Fire hydrant(s) location and water supply information.
- 4. Type/description and design layout of the automatic sprinkler system(s).
- 5. Automatic sprinkler system(s) control equipment and location.
- Type/description and design layout of the automatic standpipe system(s).
- 7. Standpipe system hose valve (s) type and location.
- 8. Fire department siamese connection type(s) and location.
- Type/description and design layout of the fire protective signaling system(s).
- 10. Fire protective signaling system(s) control equipment and remote annunciator location.
- 11. Type/description and design layout of the smoke control or exhaust system(s).
- 12. Smoke control or exhaust system(s) control equipment location.
- 13. Building life safety system features

name me surety system reacures

Continued from page 11

Record Penalty Against Wholesaler for Importing Illegal Fireworks

January 13, 1999

The U.S. Consumer Product
Safety Commission (CPSC)
announced today that a federal court
fined Shelton Wholesale Inc., of
Eagleton, Mo., \$100,000 for importing fireworks that violated CPSC
regulations. This is the highest penalty
ever paid by a fireworks company
for CPSC violations. In a companion
case, the court also rejected challenges
by Shelton and the National Fireworks Association, an industry group,
to CPSC's authority over fireworks
and the validity of its regulations.

The agency charged Shelton with importing fireworks that could

malfunction or explode unexpectedly while people are standing nearby. Although CPSC has settled dozens of cases for civil penalties, this was the first penalty in a litigated case.

U.S. District Judge Howard F. Sachs of the Western District of Missouri held that "Shelton failed to take any steps to comply with the law." The court enjoined Shelton and a related company, Polaris Fireworks Inc., from importing violative fireworks in the future, ruling that "the threat of recurrent violations is apparent in the recalcitrance of Shelton after repeated notifications of violations by the CPSC."

"If CPSC cannot settle cases with companies that violate our laws, we are fully prepared to litigate to obtain the safety that American consumers deserve," said CPSC Chairman Ann Brown. "Certainly no company will be permitted to profit by marketing unreasonably dangerous products."

The government, represented by the U.S. Department of Justice, charged Shelton and Polaris with importing or distributing more than 3.5 million banned or mislabeled fireworks between 1992 and 1996. Importing such fireworks violates the Federal Hazardous Substances Act. ◆

Plan Review Continued from page 10

(auxiliary functions) required to be integrated as part of the fire protective signaling system(s).

- 14. Type/description and design layout of the fire extinguishing system(s).
- 15. Fire extinguishing system(s) control equipment location.
- 16. Fire protection system(s) equipment room location.
- 17. Fire protection system(s) equipment identification and operation signs.
- 18. Fire protection system(s) alarm/ supervisory signal transmission method and location.
- 19. Sequence of operation of all fire protection systems and operation in the form of a narrative report.
- 20. Testing criteria to be used for final

system acceptance in the form of a narrative report.

Don't forget the requirements of NFPA 13, Chapter 6.

780 CMR 903.1.2 Plans

All fire protection system plans shall contain sufficient information to identify the occupancy, hazards, system and equipment arrangements, system and equipment sizing, system specifications, system sequence(s) of operation and design/engineering calculations.

780 CMR 903.1.3 Design

All fire protection systems and fire protection system operation including building and site features as identified in 780 CMR 903.1.1 shall be designed and specified by a qualified Registered

Professional Engineer(s). All plans shall bear the original seal and signature of the Registered Professional Engineer(s), except as provided in MGL c.143 s.54A and any profession or trade as provided in MGL c.112 s. 60L and MGL c.112 s. 81R. Specifications shall include requirements for the preparation of shop drawings when required by 780 CMR or applicable NFPA Standards. The Registered Professional Engineer(s) shall be responsible for the review and certify that all shop drawings conform to the approved fire protection construction documents as submitted for the building permit and approved by the building official. •

The Basic Steps To Professionalism

By: David J. Goggin

Reprinted with permission from a mailing to members of the Fire Prevention Association of Massachusetts, Inc.

As a fire prevention professional, you are paid to protect your community from the ravages of fire, by assuring that the various codes are complied with, and thus keeping the loss factor to a minimum. You must have an ability to communicate with and favorably impress people. This applies to both the general public as well as the other code enforcement personnel.

The lack of this ability to communicate will destroy you in your attempts to get the public involved and can make your job so frustrating. The public must be kept informed by any means available, of the purpose of fire prevention and the economic values the people you serve will reap in the long run. Use all means available to spread the word, of the benefits and dollars to be saved, if the codes are followed. You can achieve success on every level if you work with other inspectors and assure them that your position is to save lives and property from the ravages of fire.

Basic steps are suggested to obtain the professionalism you desire.

Step # 1: Professionals keep their attitude positive while all the world crumbles around them. A little bit of the world crumbles around each of us at times, so we must learn to anticipate it. It's something that cannot be avoided, so be ready to handle the crises when they occur. If you allow them to get you down, you won't be ready for the next positive thing that happens to you and you just might miss a fantastic opportunity.



Step # 2: Professionals have a certain look about them. Draw a picture in your mind of what a professional fire inspector looks like. Envision every detail from the hairstyle down to the shoes. Hopefully, your vision of a professional entails someone who stands out as being sharp and conscientious about the impression they leave with others. This same professional should portray a feeling of trust and knowledge of the fire codes, just through their actions and the way they carry and conduct themselves.

Now, look at yourself in a mirror. Do any of the details in your picture fit you? If not, maybe it's time to make some changes. Start with minor changes and watch yourself grow into that professional image you have in mind.

Step # 3: Success comes with competence. Does your car, briefcase, desk and office communicate a successful career type inspector? We all want the best for ourselves, which identifies with your image of success. Other people love to work

with someone who is the best in their chosen profession. You must keep abreast of all current codes and the changes which occur on a daily basis. We must always be sure that the statements we make are legally binding.

Step # 4: Organization is an important image to your public. This means being on time, having answers ready, handling details, and diligent followup. All these things tell people that you are a person worthy of their confidence. We are long overdue for the fire service to recognize the need for specialists, serving as fire inspector professionals, with a recognized in house respect for the positions we hold. Rank holds respect, but from the inspector up through a local fire marshal in charge, must be given the prestige which goes with the position. Our fellow firefighters must begin to recognize that the fire prevention personnel are performing the basic duty of the firefighting profession.

Step # 5: Talk like a professional. Avoid shoptalk at all costs. The public could care less about the problems you face in house. Ask questions of the public which show an interest in them and their needs. Choose your words carefully so as not to offend. They will then open up to you. Plan your presentation from the point of view of the person you are serving. Plan ahead for any contact you will make with the party whom you are dealing with. Remember, the age bracket of the person with whom you are serving or explaining a subject has to be considered. Answer questions truthfully and with authority. Even children of the lower grades with whom you are speaking deserve an answer which will stick with them forever. These children take your message home and will become your contact with the adults at home.

Step # 6: Stay in tune. The fire prevention profession is constantly changing. You will see the less competent people leaving the position in fire prevention every week. These fire prevention inspectors and officers are just passing the time of day and waiting for the time when they can get back to placing the wet stuff on the red stuff. To become a true professional you should plan on staying in the field for a long period of your career. Devote a regular part of your week to learning of new developments in the field and sharpening your skills.

Step # 7: Respect your fellow Fire Prevention Officers and Inspectors. Others in this profession have the same types of challenges you have. They deserve the same credit and recognition when they succeed and the same help and encouragement when failing. The true professional will continue to expand their educational needs. You deserve to share opinions with your fellow inspectors at meetings which can broaden your knowledge and only make you a better inspector. Your community must realize the need to permit you to expand your expertise in

the fire prevention field. The local community must be willing to spend funds on your educational needs. Each meeting you attend will permit you to interact with others who may have had to face a similar code action in the past. The common phrase often heard is "TOWN # 2 DOES NOT MAKE ME DO THAT." This is why it is so important that all opinions rendered are backed with official code interpretation. You must understand that your opinions are legal and may come back to haunt you. Verbal opinions will not stand up legally. You must automatically give written opinions and make sure that opinion is backed up with some law or regulation and is filed in your office files in the proper manner.

Step # 8: Remember family and friends. You must always remind yourself of the need to keep your family and friends on a high level of personal integrity. They want and need a high quality relationship. Be sure to plan time for family and social needs. It will help you gain an understanding of the reason you act the way you do. Your family and friends can offer support for your actions. Keep on the friendly side of all your fellow workers. They can make your position more tolerable. Do not hesitate to share the reasons for legal actions with the others in the service. The other officers within your department will often be called upon to make critical decisions in your absence. This is why it has become so important to have promotional exams, either written or oral, contain questions on the regulations as well as the General Laws. The regulations must be fully understood to assure the fire service members are aware of the implications of failure to comply with items spelled out in same. You must remain friends with your fellow inspectors in the other disciplines. They have the same goals as you, when making official opinions and hopefully they are not influenced by outside sources.

Step # 9: Serve by your example.

There are literally thousands of people in your jurisdiction who need and deserve professional assistance. If you don't provide the service required of your position, they may be shortchanged. The more people you can meet, the more you can serve. Again, the public education part of our profession is becoming an excellent opportunity to introduce the public whom we serve to the benefits of compliance with the intent of the laws and regulations. Do not set extreme unobtainable positions or orders when a softer recommendation could obtain better results. It must be remembered that we are an economically driven society. As you advocate for a policy which you hope will become the solution to a problem, your actions must often be tempered to assure success. Therefore, you must make every opportunity to spread the word by example, through the media, or by personal example. Insist that the media use the ideas you are making appear in a manner you intend them to appear. Often times a story comes out with a very different opinion or appears with the paragraphs transmitting an opinion other than that which you intended. You must assure yourself that the story is of high quality, truthful and newsworthy. Become friends with the local news editor to assure the best qualities of your stories are placed in proper perspective. A true professional knows when to ask for assistance in a field he may not truly familiar with. A true professional knows it is important to set forth the facts in a good workmanlike manner. A true professional never stretches the truth, omits information, or stalls over facts which are vital to the final solution. Blaming someone else is for amateurs. Above all work closely with other inspection officials and talk often with them to assure the simple cooperation needed to keep our communities safe from the ravages of the fire demon. When you are asked what you do for a living, you can say: I

am a "Professional Fire Inspector." ◆

Tips for Preventing Brush Fires

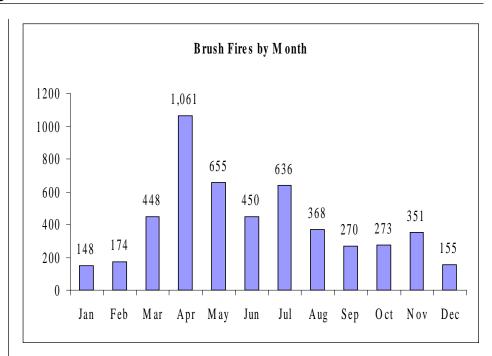
There are high-risk wildfire areas in eastern Massachusetts. Wildland with trees such as pitch pine and cedar, and shrubs such as laurel and huckleberry can be extremely prone to wildfire. Sand plains with oak and pine forests can be potential hazards as well. Swamp or marsh vegetation can also be fire hazards. Since the 1950s, increased residential development in the fire prone areas of Massachusetts has put thousands of families and homes at risk." – DEM pamphlet

- Do not throw cigarettes out of car windows. It is against the law to do so. A carelessly discarded cigarette or match can land in dry organic material resulting in a fire.
- Make certain all smoking materials are cold before disposing. Leave ashtrays out overnight before emptying into a metal container.
- Use of fireworks by private citizens is illegal in Massachusetts.
 Many brush fires have been started by the illegal use of fireworks.
- Obtain a permit for burning brush and follow safety guidelines from the local fire department.
- Never add gasoline to a brush fire, a campfire, or any barbecue grill.

You might mention how brush fires travel underground.

Camping

 Check with rangers if a campfire is permitted.



- Select a safe location for a campfire.
 Use a fireplace if one is provided.
- Make sure the fire is out when you break camp; pour water on the coals and stir the ashes. Never leave a fire unattended.
- Never add gasoline, kerosene, lighter fluid or other flammable liquids to a fire.

Lawn Mowers

- Never fuel a lawn mower while it is hot. Give it a few minutes to cool off.
- Keep hands and feet away from the mower while it is in operation. Keep small children away from power equipment.

Gasoline

- Gasoline vapors are highly flammable. These vapors stay on your clothing and can ignite if you light a match or a cigarette.
- Store gasoline only in State Fire Marshal approved containers. Storage cannot exceed one quart inside a house. In an outbuilding one can store up to one gallon if it is in an approved container.
- Store gasoline away from heat sources such as pilot lights, or gas grills.

The chart above depicts the average number of brush fires per month from 1989-1998. Brush fires occur most frequently in April, May, June and July. ◆

Fire Deaths Drop to Record Low Continued from page 1

efforts of the fire service to stop that trend in its tracks was successful. Available data indicates this is the lowest number of annual fire deaths since 1940.

In the 1970s the average number of fire deaths per year was 130. In the 1990s, that number has dropped 40% to an annual average of 70 fire deaths. The 59 fire deaths in 1998 is 25% below the average for this decade. Fire deaths in 1998 dropped 11% from 65 in 1997.

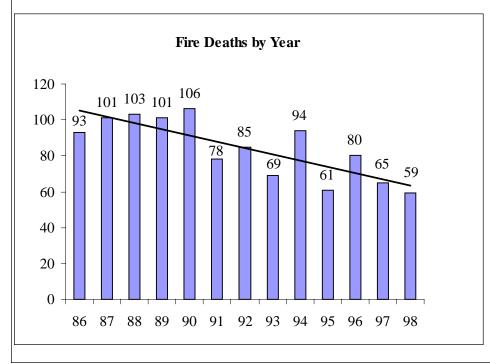
The one common denominator in the 59 fire deaths was the lack of working smoke detectors. In over 60% of the fire deaths in people's homes, there were no working smoke detectors. A working smoke detector can double the chances of surviving a fire.

State Education Efforts

State Fire Marshal Coan pointed to two statewide initiatives that helped to keep the number of fire deaths down this year. The first was a series of public service announcements on smoke detectors launched during Fire Prevention Week in October, and the second, the S.A.F.E. Program (Student Awareness of Fire Education), which awards just over a million dollars to 215 fire departments to conduct school based fire education.

Fire Chiefs and firefighters across the state were appalled at the large number of fire deaths that occurred in the first few months of 1998 and called a press conference at the State House. Fire officials have been working hard to reduce fire deaths by educating the public to install and maintain smoke detectors, to conduct smoke detector inspections, and to work with other city agencies to renew code enforcement efforts.

New Bedford Responds To Fatal Fires



New Bedford fire officials launched a major smoke detector campaign that involved multilingual public education, inspections and code enforcement, and free smoke detectors for those who could not afford them. Said Deputy Fire Chief Paul Leger, "After losing eight people in the first three months in fires where there were no working smoke detectors, the City of New Bedford pulled out all the stops and called a moratorium on fire deaths." There have been no fatal fires in the City since March, 1998.

Hampshire Co. Smoke Detectors to Elderly

Fire officials in South Hadley redoubled their education efforts after a fatal fire killed a young girl. All the fire departments in Hampshire County have joined together in a smoke detector program for the elderly who are at a high risk of dying in fires.

Hands On Fire Prevention in Wakefield

A Wakefield woman believes she is alive today because a firefighter doing an oil burner inspection insisted on testing her smoke detector. He found it had a dead battery and replaced it with one she had on hand . A few weeks later, home sick, she let a teakettle burn dry and the smoke detector alerted her. •

Data source: Massachusetts Fire Incident Reporting System (MFIRS)

EXPLOSIONS AND FIRES IN ALUMINUM OXYGEN REGULATORS

February 1999

D. Bruce Burlington, M.D., Director, Center for Devices and Radiological Health

Nancy Stout, Ed. D. Director, Division of Safety Research, CDC, NIOSH

THE PROBLEM

ver the past 5 years, the Federal drug Administration (FDA) has received 16 reports of aluminum regulators used with oxygen cylinders burning or exploding. These incidents caused severe burns to 11 health care workers and patients. Many of the incidents occurred during emergency medical use or during routine equipment checkout. The FDA and the National Institute for Occupational Safety and Health (NIOSH) believe that the aluminum in these regulators was a major factor in both the ignition and severity of the fires, although there are likely other contributing factors. Most of the reports received by the FDA were for the Model L270 series of aluminum regulators manufactured by Life Support Products Inc. and Allied Healthcare Products Inc. (Earlier models were known as "270" regula-

Allied Healthcare Products currently has 60% of the market share of oxygen regulators for emergency use. The manufacturer has plans to cease the distribution of all regulators containing aluminum and solely manufacture brass regulators. In an effort to avoid potential product shortages, Allied is instituting an interim measure wherein they will replace internal high-pressure aluminum components with brass components in all models manufactured.

Because aluminum is lighter in weight than steel, it is also used in oxygen cylinders. The FDA and NIOSH believe that aluminum cylinders can be used safely with brass regulators, but that the combination of both oxygen

regulators and cylinders made from aluminum poses an increased fire hazard. Contamination of the oxygen supply with particulate matter can also increase the risk of fire.

BACKGROUND

Most oxygen regulators are made of brass or aluminum. Aluminum and its alloys are more likely to ignite than brass. In standard tests, aluminum can burn vigorously at pressures as low as 25 pounds per square inch (psi), while brass does not burn at pressures below 10,000 psi. Although there are rare instances of fires in brass oxygen regulators, they have a long history of safe use and are believed to be safer than aluminum oxygen regulators for use with high pressure compressed oxygen. FDA has no reports of fire or explosion with aluminum oxygen regulators used in low pressure systems (e.g., piped distribution to wall mounted supply taps at <50 psi.)

RECOMMENDATIONS

The FDA is pursuing plans to work with manufacturers to improve the safety of oxygen regulators and restrict the use of aluminum exposed to high-pressure oxygen in regulators. In the meantime, FDA and NIOSH advise that the following precautions be taken to avoid explosions and fires from oxygen regulators containing aluminum:

- If you are presently using high pressure oxygen regulators which contain any aluminum exposed to high-pressure oxygen, replace them with regulators made of brass.
 Consult the manufacturer if you don't know what material is used in your regulators.
- If non-aluminum oxygen regulators are not available, it is recommended that you follow the precautions as described in the addendum to this advisory to minimize the risk of fires

until brass replacement regulators become available.

REPORTING ADVERSE EVENTS TO FDA

The Safe Medical Devices Act of 1990 requires hospitals and other user facilities to report deaths, serious illnesses, and injuries associated with the use of medical devices. Questions about mandatory reporting can be answered by the Division of Surveillance Systems, Reporting Systems Branch by phone on (301) 594-2735 or FAX, (301) 827-0038 or write to FDA, CDRH, MDR User Reporting, P.O. Box 3002, Rockville, MD 20847-3002. Written reports will go into FDA's MDR data base. Submit voluntary reports directly to the FDA's voluntary reporting program, MedWatch; by telephone at (800) FDA-1088, by FAX at (800) FDA-0178, or by mail to: MedWatch, Food and Drug Administration (HFA-2), 5600 Fishers Lane, Rockville, MD 20857-9787.

GETTING MORE INFORMATION

Send questions about this Public Health Advisory to the Issues Management Staff, Office of Surveillance and Biometrics, HFZ-510, 1350 Piccard Drive, Rockville, Maryland, 20850, FAX (301) 594-2968, or e-mail ssm@cdrh.fda.gov or aag@cdrh.fda.gov. You may photocopy or print this notice from the CDRH homepage at www.fda.gov/cdrh/safety.html.

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SAFE PRACTICES FOR HANDLING AND OPERATING OXYGEN EQUIPMENT

ous. Although oxygen does not burn, it does support combustion. A material which will not burn in air may burn in high pressure pure oxygen - such as the metal in oxygen regulators or cylinders. Comprehensive guidelines and training on safe practices for handling oxygen are available from several sources listed at the end of this section. Some general guidelines for minimizing the chance of fire are provided below:

Storage, Maintenance and Handling:

- Do not allow smoking around oxygen.
- Store oxygen in clean, dry locations away from direct sunlight.
- Do not allow post valves, regulators, gauges, and fittings to come into contact with oils, greases, organic lubricants, rubber or any other combustible substance.
- Make sure that any cleaning, repair or transfilling of oxygen equipment is performed by qualified, properly trained staff.
- Do not work on oxygen equipment with ordinary tools. Designate special tools, clean them and store them for Use With Oxygen Equipment Only.
- Ensure that any components added to the regulator, e.g., gauge guards, are installed so that they do not block the regulator vent holes.
- Use plugs, caps and plastic bags to protect "off duty" equipment from dust and dirt.
- Particulate migration from the cylinder can be minimized by the installation of a standoff tube (bayonette) at the inlet of the post valve.

Use:

- Make sure that staff using oxygen equipment are adequately trained in its operation and in oxygen safety and have knowledge of manufacturers instructions for using the equipment.
- Visually inspect the post valve gasket and regulator inlet prior to installation.
 If they are not visually clean they should not be used.
- Momentarily open and close ("Crack") the post valve to blow out debris prior to installing a regulator.
- Ensure that the regulator is set with the flow knob in the off position before attaching it to the cylinder.
- Position the equipment so that valve is pointed away from the user and any other persons.
- Open the cylinder valve slowly and completely to minimize the heat produced and achieve the desired flow conditions within the equipment.
- Do not look at the regulator pressure gauge until the cylinder valve is fully opened.

Additional information, guidance and training regarding oxygen and fire safety can be obtained from a number of sources, including the following organizations:

- Compressed Gas Association, 1725
 Jefferson Davis Highway, Suite 1004,
 Arlington, VA 22202-4102
 (www.cganet.com)
- National Fire Protection Association,
 1 Batterymarch Park, Quincy, MA
 02269-9101 (www.nfpa.org)
- American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 (www.astm.org)

 Centers for Disease Control and Prevention National Institute for Occupational Safety and Health, Division of Safety Research. Oxygen Regulator Flash Severely Burns One Fire Fighter - Florida, Report Number 98-F23. This report is available on the NIOSH homepage at: (www.cdc.gov/niosh/ firehome.html). ◆

Job Posting:

Explosive Safety Coordinator

The Explosives Safety Coordinator will be the primary contact for local fire departments, the commercial explosives, drilling and blasting industries, and the general public for inquiries regarding explosives safety regulations, including blasting complaints, permitting issues and violations of the regulation.

The Coordinator provides interpretation of the rules and regulations; contributes to the development and modification of regulations; functions as the OSFM expert during administrative hearings to determine if violations of blasting regulations have occurred. The Coordinator reports to the division director at the OSFM in Stow. The coordinator also provides technical support to the Enforcement Unit of the OSFM with regard to blasting accidents and complaint investigations.

This is part-time contract position, 20/hours per week, \$20-25/hour, with no benefits.

Application deadline is March 19, 1999. Contact: Thomas M. Abbot, Personnel Manager at (978) 567-3139. ◆



STUDENT AWARENESS OF FIRE EDUCATION

The S.A.F.E. Program is in the I middle of its fourth year. Midyear reports were submitted to the Fiscal Affairs Office at the DFS. Beyond the fiscal report and the activity sheet, the communities were asked to submit a narrative report briefly explaining what has gone on with the S.A.F.E. program in the local community. Most of the programs are working in areas well established with previous year's moneys and efforts. Some communities reported that due to fiscal constraints (reflecting the increase in communities applying for the grant and money remaining level funded) they would be consolidatingd their programs and looking to deliver their programs in the spring.

There are those S.A.F.E. educators that have worked very diligently at taking their programs to the next level. Many communities are teaming up with other local agencies to increase their visibility. Leicester, Westford, Hanover, Wakefield, Bellingham, East Longmeadow, and Wilbraham have combined with the Lions Club, Rotary Club, Boston Shriners Burn Hospital, Dairy Queen, Home Depot, Explorer Post, and the DARE Program. Sharon is working with the MBTA and Amtrak on "Operation Lifesaver" a program dealing with rail safety and they have been able to include S.A.F.E. education in the presentation. West Stockbridge, Holland, and Marlborough have received support from parent's organizations. Westborough,

Taunton, and Fairhaven are working closely with anti-tobacco coalitions and programs 'to shape the thinking mode of the young people in recognizing the dangers of smoking.'

Mattapoisett is involved in a "Newcomer's Day" sponsored for seventh graders at their local middle school. The program's goal is to promote responsibility for seventh graders and the fire educator's role is to make them aware of fire and life safety issues. Westfield has held meetings with child care providers and early childhood development college professors to incorporate fire and life safety into the college curriculum. Pittsfield is developing a fire safety program for foreign college students, bus drivers, and police explorer groups. Acushnet has a website designed for public fire education. Easthampton has expanded their program and added a third educator to the S.A.F.E. program and is reaching into the middle school. Auburn, Pittsfield, and Holden are also reaching into the middle school. Ludlow, Northbridge, and Hull have built interactive, portable props to take into the schools so the students can experience first hand smoke detector activation, crawling low under smoke, and practicing exit drills in the home (E.D.I.T.H.)

Young Heroes

The S.A.F.E. program continues to have success stories. Forty-seven young heroes have been recognized over the past four years. The number of students that the S.A.F.E. program has directly touched is fast approaching 850,000. This does not include the number of family members and care providers the young people touched by bringing home fire safety messages. For the first since World War II the number of fire related deaths (59) in the Commonwealth is at an all time low. The S.A.F.E. program can in part take credit for this most impressive statistic. There is still much work to be accomplished and with the support of all, fire and life safety education can continue to grow and be an everyday part of each person's life.

Steven Fontaine and Edwin Lynds, Auburn

On January 10, 1999 at about 1:50 am during a sleepover at Steven's house, the two boys noticed a glow outside of the window. They looked out the window and saw flames coming from the neighbor's house. Knowing that Mary Devincentis was handicapped and requires assistance to get out of bed, the boys alerted Steve's parents who quickly called 9-1-1. Mrs. Devincentis was rescued by the fire department, transported to the hospital for smoke inhalation and later released. Without a doubt, the cool headedness and quick thinking on the part of the boys saved Mrs.

Devencentis without a doubt. •

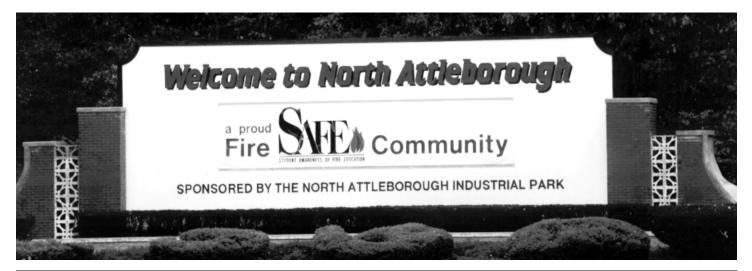
North Attleboro S.A.F.E. Billboard

By Mike Dillon, North Attleboro S.A.F.E. Coordinator

Many years ago, a company called Balfour, which is well known for manufacturing school class rings, came to North Attleboro. They needed a way to reach many people and created two large billboards, each approximately 15' X 30' located on either side of Route 95, one southbound and one northbound. A few years ago the company moved to Texas. One of the signs became an advertisement for a local golf course in Attleboro and the other sign was purchased by the *North*

Attleboro Industrial Park Association. They in turn cleaned and repaired the billboard and decided to let the local community use it for their nonprofit organizations and for the police and fire departments. The sign is all white with North Attleboro Industrial Park Association written across the bottom. It is lit up at night and has Velcro on it so the different organizations can put up and removed different banners, each measuring approximately 6' X 25'. Most of the time the police department has a Drive Safely sign up. At certain time periods the message gets

changed. The members of the fire department have a nonprofit organization called *Kids Day* and they put up a banner announcing their event. The fire department also has a Division of Fire Prevention which takes care of all the public education for the schools, the elderly and the general public. The school-based programs are funded through the S.A.F.E. Program − Student Awareness of Fire Education − and the S.A.F.E. banner proclaims that North Attleboro is a S.A.F.E. community. ◆



Fire and Explosion Investigation Section Sends 3rd Bomber to Jail

n October 5, 1997, the Holyoke Fire and Police Departments responded to an explosion on Center Street that blew apart a car and ripped into homes. West Team members Sgt. Giulino and Troopers Mazza, Percy, Hart, Perwak and Sgt. Damery of the Hazardous Devices Unit arrived and rendered the scene safe. Sgt. Damery and the West Team members responded to a second explosion which occurred three miles away in Chicopee where a garage door blew apart and the handle was embedded in a car bumper. It turned out the Holyoke bomb was a "test" for the Chicopee explosion.

The joint investigation included Special Agent Thomas Lister from the federal Bureau of Alcohol, Tobacco and Firearms, Assistant District Attorney Laurel Brandt as well as local fire investigators and police officers. An intense six-week investigation conducting interviews, collecting evidence and scene documentation including aerial photography from the State Police Air Wing, resulted in criminal charges against four people.

Michael Bogdanovich, 24, of Clarendon Street, Chicopee and Sean Christensan, 23, of Mt. Carmel St., Chicopee were separately sentenced to six to nine years in prison. Steven

Sosnowicz, 30, of West Springfield was sentenced to eight to 10 years and a fourth person, Steven Hency, 34, of Easthampton and Holyoke is still awaiting trial. The charges against all four included possession of an infernal machine, malicious destruction with an explosive and willfully throwing an explosive. Revenge is believed to be the motive for the bombings.

Holyoke Fire Chief David LaFond said, "I am very pleased to announce that ego, rank or title never ever got in the way of this extraordinary successful investigation. The 'team concept' of fire and explosion investigation definitely works." •

New Web Site for Kids

The U.S. Consumer Product Safety Commission unveiled a new and improved "Kidd Safety" web site. It is designed to educate children about safety issues that they encounter every day, from hazards around the home to preventing injuries while playing sports.

Located at www.cpsc.gov/kids/kidsafety/index.html, the CPSC kid's web site is designed for children ages 8 to 12. Using educational, interactive and fun activities, the web site teaches kids how to be safe in their homes. The site combines a fun-loving character named Kidd Safety, with animation and sound to convey CPSC's messages of safety to children.



Featured on the site are: a memory game, which is disguised as a virtual home full of safety tips; a hangman game, which provides clues to safety terms; an interactive safety game, which challenges the player to catch the safety items, but dodge unsafe items; and a few puzzles, to test a child's overall safety knowledge. •

Federal Hotel Motel Fire Safety Act

The federal Hotel-Motel Fire Safety Act of 1990 encourages hotels and motels to install smoke detectors and sprinklers in order to be listed on the National Master List. This list is used by federal travelers and meeting planners who are required to spend a majority of travel dollars and travel nights at certified facilities. There is no charge for a property to be listed.

The purpose of the Act was to put federal employees in fire safe properties while traveling on official business and to encourage hotels and motels to become more fire safe in order to compete for this business. A series of tragic, fatal hotel fires in the 1980s such as the MGM Grand Hotel in

Las Vegas and the Dupont Plaza Hotel in San Juan inspired lawmakers to pass this law.

A hotel or motel must meet two basic requirements to be listed:

- Every guest room must be equipped with a hardwired single station smoke detector installed in compliance with NFPA 74. AND
- If the building is more than three stories tall, it must have a fully automatic sprinkler system installed in accordance with NFPA 13 or 13R.

In Massachusetts a hotel-motel owner or manager must complete the selfcertification form and submit the

original to the Office of the State Fire Marshal (facsimile copies are not acceptable because they do not contain an original signature) and a photocopy to the local fire department. There is no inspection requirement to self-certify for the national list, but the photocopy to the local fire departments who have a responsibility to perform quarterly inn holder inspections has caught a few hotels trying to fudge the selfcertification. The Office of the State Fire Marshal forwards the list of certified hotels and motels to the U.S. Fire Administration for inclusion in the National Master List. There are currently 340 hotels and motels listed in Massachusetts. •

Code Compliance Unit Active in Two Manufacturing Accidents

The Code Compliance Unit in the Office of the State Fire Marshal has been active at two recent fires and explosions involving flammable liquids in manufacturing facilities. These incidents in Westminster and Lowell have many similarities even though the two communities have different levels of fire protection.

Westminster

The Westminster incident occurred in mid-July, injuring two workers, at a fiberglass resin rendering company. Upon notification by the Fire Investigation Section, Compliance Officer Bill Middlemiss responded and performed an inspection of the facility with Lt. John Fleck, Westminster Fire Department. Their initial observations concluded numerous violations of the fire prevention regulations including, Class I liquids stored in 55 gallon drums stacked four high, open drum storage, mixed non-compatible storage, open wiring and more. Due to the numerous compliance issues and the size of the facility, it was decided to bring in additional compliance officers the following day.

Code Compliance Supervisor Wayne Delaney and Code Compliance Officer Dave Beaudin joined in the follow-up inspection, which focused on prioritizing the hazards present. Lt.

Fleck was the lead officer, and was joined by the local building and electrical inspectors. A request was made for a copy of all licenses and permits, as well as a floor plan and inventory of the facility. Following a floor by floor, room by room inspection that included photographs, and data-collection, all members of the inspection unit met back at the Westminster Fire Department. During this meeting a detailed code review occurred. This review focused on a multitude of issues including: quantities licensed to store vs. actual quantities stored, storage practices vs. 527 CMR 14 and NFPA 30, fire sprinkler vs. the hazard protected, static grounding and bonding vs. 527 CMR 18, electrical system vs. 527 CMR 12, and several others. Further there were no LEL warning devices at this facility.

As a result, it was decided jointly before operations could resume at this facility many items had to be corrected and a plan must be instituted to ensure continued compliance. A member of the compliance unit detailed the issues that had to be corrected and served an Order of Notice upon the owner. It was further required that a fire protection engineer conduct a fire safety analysis of the operation and provide recommendations to ensure all compliance issues were addressed.

Trooper James Bradbury of the fire investigation unit determined that the ignition source of this incident was a spark from the ignition of an LP fork truck. It was determined this type of fork truck is not listed for use in a volatile flammable liquids environment as prescribed in NFPA 505, Fire Safety Standard for Powered Industrial Trucks.

The Westminster facility has since been allowed to continue their operation in various stages, pending upgrades to the plant wiring, ventilation, sprinkler system and other operational requirements as set forth by the compliance unit and the Westminster Fire Department. Compliance monitoring is ongoing and the plant is still upgrading various parts of their operation.

Subsequently, the Fire Marshal's Office has successfully filed with the Board of Fire Prevention Regulations, amendments to 527 CMR 10.00 regulating the use of industrial fork trucks in hazardous environments.

Lowell

While still working with the Westminster Fire Department, another fire and explosion occurred in the City of Lowell. A large industrial coating facility had an accident in a coating line injuring several workers. This particular

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New Publications from the USFA

The new publications available from the United States Fire Association:

- After the Fire! Returning to Normal
- Fire in the United States 1986-1995 (Tenth Edition)
- Fire Service Resource Guide
- Recruitment and Retention in the Volunteer Fire Service: Final Report

- Rural Fire Problem in the United States
- St. George Hotel Complex 16 Alarm Fire, Brooklyn, New York
- United States Fire Administration Brochure

Publications may be ordered by calling USFA's 24-hour publications line at (301) 447-1660 or the Publications Center at (301) 447-1189 between 8:30

a.m. - 5:00 p.m. EST/EDT. To order publications by mail, write to:

Publications Center United States Fire Administration 16825 South Seton Avenue Emmitsburg, MD 21727

Please include your name, mailing address, daytime telephone number, date required, title(s) of the publication, and the quantity you need when ordering by phone or mail. •

Smoke Detectors in Manufactured housing

Manufactured housing brought onsite within the Commonwealth must comply with 780 CMR R3. All manufactured housing components are pre-approved prior to being shipped to a site. This approval process includes all building system components, including the fire protection system and all other systems affecting health and safety.

When conducting an inspection of these homes, an inspector will notice detectors located on walls. The inspector should request to see the certification label, for this home. If the building contractor supplies this document or label, the home must be considered compliant. If at any time any inspector has a question contact should be made with Tom Rogers at the BBRS 617-727-3200.

Do not require additional detectors, or the relocation of detectors in these homes. They are compliant with the regulations. •



FEMA Massachusetts Urban Search and Rescue Task Force

April 14, 1999 Demonstration

In the event of a major structural collapse in your community, with victims trapped under tons of reinforced concrete and twisted steel, what existing local resource can be activated that is trained and fully equipped to respond rapidly, locate the victims, cut through heavy debris, provide onscene specialized medical care and extrication assistance?

The FEMA Massachusetts Urban Search and Rescue Task Force is a disaster/heavy rescue response team based in Beverly, Massachusetts. The team is capable of responding to any natural or man-made disasters locally or as part of the Federal Emergency Management Agency's Urban Search and Rescue Response System. The primary responsibilities of the team are identifying, locating and extricating victims from collapsed structures resulting from events such as earthquakes, hurricanes, and bombings. The Massachusetts Task force was deployed by FEMA to the 1996 Atlanta Olympic Games to provide emergency response. The Task Force personnel are drawn from fire depart-

The demonstration will happen at the DFS Stow campus on April 14, 1999 from 1-4 PM with an overview of how to request the task force and what its capabilities are. This will take place in the auditorium followed by a demonstration in the drill yard on concrete breaching, electronic search (acoustic and search camera), shoring, and K-9 search. ◆

1999 DFS Summer Fire Safety Camp

he 1999 Department of Fire ▲ Services (DFS) Summer Fire Safety Camp will be held July 20-23, 1999 for children between the ages of 10 and 14. Each day approximately forty children will experience what fire service careers have to offer and learn a little about fire safety through fun activities. On July 20, 21, and 22 summer camp will be held at the Stow campus of the DFS. On Friday, July 23, summer camp will be held in West Springfield on the grounds of the "Big E"

for fire departments in Berkshire, Franklin, Hampden and Hampshire Counties only.



Local fire chiefs should have already received their packet in the February monthly mailing from the DFS. The

Fire Chief must return the Intent to Participate Form by May 3, 1999 so we may begin planning the bus routes and designing the regions to accomodate the maximum number of children may participat. Call the Fire Data & Public Education Unit at (978) 567-3381 for more information. •

Update on CMR 2: Fireworks

March 11, 1999 0900 – 1300 hours Westfield Fire Department

March 17, 1999 0800 – 1200 hours Plymouth Fire Department

April 6, 1999 0800 – 1200 hours Peabody Fire Department

April 20, 1999 0800 – 1200 hours DFS, Stow

May 13, 1999 0800 – 1200 hours Quincy Training Center May 20, 1999 1800 – 2200 hours DFS, Stow

June 10, 1999 1800 – 2200 hours Lanesborough Fire Department

These programs are listed in the current flyer from MFA and require the standard MFA student application. Additional dates will be added to this schedule that will take place in the evenings in Stow and Northampton during May and June. These seminars are highly recommended if your community is planning for a fireworks show this year. It is expected that many of the questions you have will be answered through these programs.

Continued from page 1

In addition to these training seminars, ongoing support is available from the Office of the State Fire Marshal. Preshow site inspections are highly recommended if there is any doubt as to whether a fireworks show is compatible with a particular site. The new table of distances does have an impact on the type of show that may take place. Understanding that many communities are now beginning to take bids for the upcoming fireworks season, now is a good time to take a look at the planned site. If your community is planning a show and there are questions regarding the site, please call the OSFM Compliance/ Enforcement Unit at 978-567-3300 to arrange for a site inspection or to speak with a Compliance Officer. •

process involves several Class I flammable liquids while several other processes use Class II and III combustible liquids. An inspection was conducted by Compliance Officer Bill Middlemiss with Captain John Webber and Inspector John Vail of the Lowell Fire Department and the gas and electrical inspectors for the city. Following the inspection, a meeting was held with those who participated and serious concerns were raised regarding the immediate threat of fire and explosion from several natural gas line fractures within the facility. An Order of Notice was issued to the owners of the facility by Bill Middlemiss to cease and desist operations until all gas lines were repaired and tested. Further, the order required that a fire protection engineer conduct a fire safety analysis of this facility.

Following a systematic inspection of the facility, compliance concerns were placed in priority. This inspection revealed many of the same issues that were present at the Westminster facility. The storage license was compared to the available inventory, flammable and combustible liquid storage vs. 527 CMR 14 and NFPA

30, the sprinkler system vs. NFPA 13, static grounding and bonding vs. 527 CMR 18, ventilation vs. 527 CMR 18, industrial forktruck vs. NFPA 505 and many others. In addition to the above concerns, it was discovered that LEL meters on the drying ovens were equipped with an on/off key switch. It is unclear if this switch was off or on at the time of the incident.

The quantities of flammable and combustible liquids stored at this facility were three times the licensed quantities. The fire department's support of an amended license with increased capacities has been made contingent upon compliance with and correction of several issues. Other significant problems were discovered at this facility during additional meetings and inspections. While progress is being made at this facility there is continual monitoring by the Lowell Fire Department with the support of the Code Compliance Unit.

Various lessons have been learned and enacted as a result of the experiences in both Westminster and Lowell.

 The Board of Fire Prevention Regulations has adopted the NFPA

- Standard 505 to govern the use and location of industrial fork trucks.
- All communities should periodically review sites with licenses granted in accordance with M.G.L. Chapter 148, section 13. Perhaps this could be done on or before April 30 of every year before the city or town clerk issues registrations.
- In-service inspections should include more than means of egress and general housekeeping. Each facility should provide a copy of their inventory to be reviewed against any permits or licenses granted for that location.
- Flammable and combustible liquids must be maintained in properly constructed storage areas.
- Suspected violations of other codes and regulations should be noted and referred to the proper authorities.
 (i.e. building inspector, health agent, electrical inspector, gas inspector, State Fire Marshal, DEP, and OSHA).

Interagency cooperation is essential for successful compliance and enforcement initiatives. •